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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,274	03/31/2004	Yoshinori Hama	251159US0	5411
22850	7590	06/19/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER	
			SHOSHO, CALLIE E	
		ART UNIT	PAPER NUMBER	
		1714		
			NOTIFICATION DATE	DELIVERY MODE
			06/19/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/813,274	HAMA ET AL.	
	Examiner Callie E. Shosho	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 March 2007.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,4-11,13-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,4-10,13-15 and 17 is/are rejected.
- 7) Claim(s) 2,11 and 18-20 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. All outstanding rejections and objections are overcome by applicants' amendment filed 3/14/07.

The new grounds of rejection set forth in paragraphs 2-3 below are necessitated by applicants' amendment and thus, the following action is final.

**Claim Rejections - 35 USC § 112**

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claim 15 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "the kneading device" in line 6. There is insufficient antecedent basis for this limitation in the claim. In light of the amendment to claim 15, line 5, it is advised that "the kneading device" in line 6 is amended to recite "the kneader".

**Claim Rejections - 35 USC § 103**

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1, 4-10, 13-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohta et al. (U.S. 4,597,794) in view of Inoue et al. (U.S. 6,412,940).

The rejection is adequately set forth in paragraph 9 of the office action mailed 12/14/06 and is incorporated here by reference.

#### Response to Arguments

6. Applicants' arguments filed 3/14/07 have been fully considered but they are not persuasive.

Specifically, applicants argue that while Inoue et al. disclose kneading machines such as kneaders, double roll-mills, triple roll-mills, sand mills, etc., at best Inoue et al. teaches that such machines are equivalent and does not disclose any particular advantage by first carrying out kneading with kneader then carrying out kneading with roll-mill as presently claimed. Applicants also argue that the examiner did not provide any motivation for why it would have been obvious to carry out the presently claimed process, i.e. kneading with kneader before kneading with a roll-mill.

It is noted that Ohta et al. disclose process for forming aqueous dispersion of a pigment comprising kneading pigment, solvent, water, neutralizer, and polymer using sand-mill. There is no disclosure that the kneading occurs by kneading with a kneader followed by kneading with a roll-mill.

Inoue et al. disclose mixing pigment, dispersant, water, and solvent using kneading machines such as kneader, double roll-mill, triple roll-mill, sand mill, etc. Further, Inoue et al. disclose that the machines are used in combination which clearly includes kneading using

kneader followed by using roll mill as presently claimed. In light of such disclosure, it would have been obvious for one of ordinary skill in the art to utilize combination of kneading machines, including kneader and roll-mill as presently claimed, in place of the sand mill in Ohta et al.

Further, it is the examiner's position that the kneading machine, i.e. kneader, roll-mill, etc., is a result effective variable, because changing the type and number of kneading machines utilized will clearly affect the type of product obtained including the average particle size of the pigment. See MPEP 2144.05(B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinary within the skill of the art", *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Applicants argue that they have disclosed that carrying out kneading in two steps in a certain sequence, i.e. kneader then roll-mill, provides a composition of improved grain quality such as fewer grains and thus, applicants were able to prepare a pigment dispersion having smaller average particle diameter.

However, applicants have provided no evidence to support their position that carrying out kneading in two steps in a certain sequence provides improved results.

It is noted that the present specification provides comparative data. The data compares process within the scope of the present claims, i.e. utilizing kneader followed by roll mill (example 1), with process outside the scope of the present claims, i.e. utilizing no kneading machines (comparative example 1) or using different kneading temperature (comparative example 2).

However, such data is not persuasive in overcoming the rejection of record. Specifically, comparative example 1 is not commensurate in scope with the scope of the “closest” prior art given that the prior art requires the use of at least one kneading machine while comparative example 1 does not utilize a kneading machine. Thus, the process of the prior art is closer to the present invention than the process of comparative example 1. Further, there is not proper side-by-side comparison between the process of example 1 and the process of comparative example 1 given that the process of comparative example 1 utilizes much higher amount of water, i.e. 67 parts versus 7 parts for process of example 1, and thus, produces mixture with much lower solids content, i.e. 26% versus 67% for example 1.

With respect to comparative example 2, it is noted that there is not proper side-by-side comparison between the process of example 1 and that of comparative example 2. The process of example 1 utilizes 5 parts methyl ethyl ketone, 7 parts water, has solids concentration of 67% after adding pigment, and kneads with kneader for 2 hours while the process of comparative example 2 utilizes 4 parts methyl ethyl ketone, 1 part water, has solids concentration of 83% after adding pigment, and kneads with kneader for 30 minutes. Thus, it is not clear if the differences between the two processes are due to the use of different kneading temperature or to the different amounts of components utilized in the process. Further, it is significant to note that the kneading temperature is only required in present claim 2 and thus, such data is only commensurate in scope with the scope of present claim 2. Additionally, it is significant to note that present claim 2 is not rejected by the prior art of record.

Thus, it is the examiner’s position that applicants have not established that criticality or advantage of first using kneader then roll mill as presently claimed as compared to using only

one kneading machine, i.e. sand mill, or as compared to using different combination of kneading machines or using the kneading machines in different sequence.

Thus, given that Ohta et al. disclose kneading, given that Inoue et al. disclose using combination of kneader then roll mill as presently claimed, given that it would have been obvious to one of ordinary skill in the art to utilize appropriate combination of kneading machines including kneader followed by roll mill as presently claimed so as to produce product with desired end results including average size of the pigment and absent evidence to the contrary, it is the examiner's position that the combination of Ohta et al. with Inoue et al. remains relevant against the present claims.

**Allowable Subject Matter**

7. Claims 2, 11 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 11 and 18-20 would be allowable if rewritten in independent form for the reasons set forth in paragraph 12 of the office action mailed 1/14/06.

Further, claim 2 would be allowable if rewritten in independent form as described above given that there is no disclosure or suggestion in the "closest" prior art Ohta et al. (U.S. 4,577,794) of temperature utilized during kneading and thus, no disclosure of process for preparing an aqueous dispersion of a pigment comprising (A) kneading a mixture containing a pigment, a polymer having a salt-forming group, a neutralizing agent, an organic solvent, and water wherein the concentration of matter is from 50 to 80% by weight, (B) adding water and/or

organic solvent to the resulting kneading mixture to dilute the mixture, and (C) dispersing the solid matter in the resulting diluted mixture wherein the resulting kneaded mixture is subject to step (B) after the mixture is kneaded with a kneader and further kneaded with a roll mill in step (A) wherein the temperature during kneading is at most 50 C in step (A) as required in present claim 2.

**Conclusion**

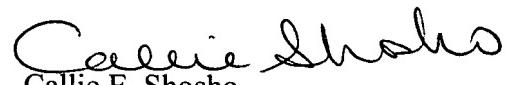
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Callie E. Shosho  
Primary Examiner  
Art Unit 1714

CS  
6/10/07